

# Selection table

	Identification	Characteristics	Working temperature	Details	Illustration	
Standard tensioner devices	<b>SE</b> Standard component	Steel parts ROSTA blue painted. Rubber quality Rubmix 10.	Housing and inner core made out of steel.	-40° to +80° C	Page 4.6	
	<b>SE-G</b> Oil resistant	Steel parts galvanized. Rubber quality Rubmix 20. Marked with yellow dot.		-30° to +90° C	Page 4.6	
	<b>SE-W</b> Heat resistant	Steel parts ROSTA blue painted. Rubber quality Rubmix 40. Marked with red dot. Tension force 40% less than SE.		+80° to +120° C max.	Page 4.6	
Additional tensioner devices	<b>SE-R</b> Reinforced lever arm	Arm and inner core especially welded for use on combustion engines and compressors. Steel parts ROSTA blue painted. Marked with white ring.	Housing and inner core made out of steel, inserts Rubmix 10.	-40° to +80° C	Page 4.6	
	<b>SE-I</b> Stainless steel	For the use in food- and pharmaceutic industries. Material: GX5CrNi19-10. Exception: SE-I 40 made out of X5CrNi18-10.			Page 4.6	
	<b>SE-B</b> Boomerang®	For the tensioning of very long chain and belt drives (triple compensation). Steel parts ROSTA blue painted.			Page 4.7	
	<b>SE-F</b> Front mounting device	For installations on blind-hole frames (fixation from the front only). Steel parts ROSTA blue painted. Hex socket screw quality 12.9.			Page 4.7	
	<b>SE-FE</b> Front mounting device	For installations on blind-hole frames (fixation from the front only). Steel parts black painted. Hex socket screw quality 12.9. Especially designed for engine applications.			see page 4.7	Page 4.7
Accessories chain drives	<b>Sprocket wheel set N</b>	Allows accurate positioning of relevant chain track. Ball-bearings 2Z/C3, permanently lubricated.	-40° to +100° C	Page 4.8		
	<b>Sprocket wheel N</b>					
	<b>Chain rider set P</b>	For double sided use. Max. allowed chain speed 1.5 m/sec. Material: POM-H.	-40° to +100° C	Page 4.9		
<b>Chain rider P</b>						
Accessories belt drives	<b>Tensioning roller R</b>	Material: PA 6. Ball-bearings 2Z/C3, permanently lubricated.	-35° to +100° C	Page 4.10		
	<b>Tensioning roller light RL</b>	Material: PA 6. Ball-bearings 2Z/C3, permanently lubricated.	-35° to +80° C	Page 4.10		

Further information to customized elements and installation examples as from page 4.12.



# General technology

The ROSTA tensioners should be installed on a stiff, even and clean machine part by means of the central bolt. The frictional connection on flange is usually fully sufficient for final positioning. The positioning notch on flange can be used to assure the tensioner additionally on uneven and dirty surfaces by setting a roller-pin.

## Tensioning force F

The tensioning force can be continuously adjusted. The max. pre-tensioning angle is +30° out of neutral position. Tensioning force table for types **SE / SE-G / SE-R / SE-F / SE-I** by using **hole-position "normal"** for sprocket-, rider- and roller fixation.

Size SE	Pre-tension $\leq 10^\circ$		Pre-tension $\leq 20^\circ$		Pre-tension $\leq 30^\circ$	
	F [N]	s [mm]	F [N]	s [mm]	F [N]	s [mm]
11	15	14	40	27	80	40
15	25	17	65	34	135	50
18	75	17	185	34	350	50
27	150	23	380	44	810	65
38	280	30	720	60	1500	88
45	520	39	1350	77	2650	113
50	740	43	2150	86	4200	125

**SE-I 40:** same tensioning force like SE 38.

**SE-W:** 40% lower tensioning force than standard versions (Rubmix 40 inserts).

**SE-FE:** see page 4.7

**When fixing the sprockets, riders and rollers in arm-position "hard", tensioning force will increase on about 25%.**

## Mounting instructions

For further mounting instructions please consult the pages 4.9–4.11.

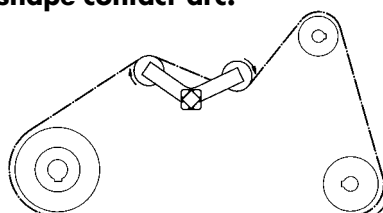
### Z-configuration of sprockets or riders

If there is the need to install sprockets, riders or rollers on the outer arm-side of the tensioner, then the distance "Z" should be as little as possible to avoid a misalignment in element parallelism. Furthermore the pre-tension force should not exceed 50% of the capacity = max. pre-tension angle of  $\sim 20^\circ$ .



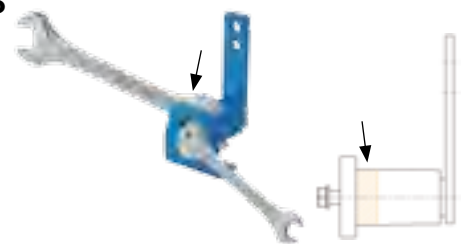
### Use of SE-B Boomerang® tensioners

In very long chain and belt drives it was recommendable to install on the slack-side several tensioners, in order to compensate occurring elongation. The "Boomerang" with its bent double-arm equipped with two chain sprockets or a combination of grooved pulley and flat-roller (belt-drives) **offers a triple-compensation of chain and belt elongations, due to S-shape contact-arc.**

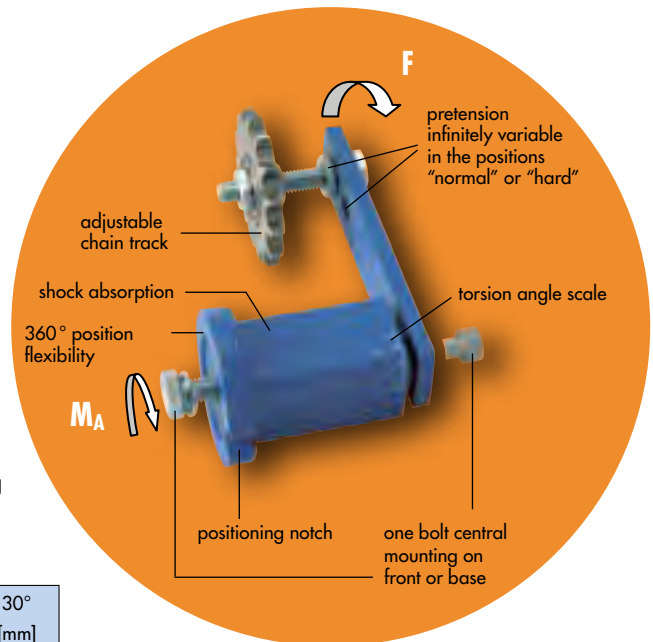


### Tensioner mounting

Tighten the flange screw slightly. Grip the housing with flat-wrench and set needful pre-tension by rotating the housing in the required direction. Tighten the central screw according the above mentioned tightening moment  $M_A$ . **Position flat-wrench close by the flange-bottom.**



**ROSTA**  
www.rosta.com



## Tightening moment $M_A$ for attachment screw

Table mentioning the tightening moment for the central screw (included in scope of delivery).

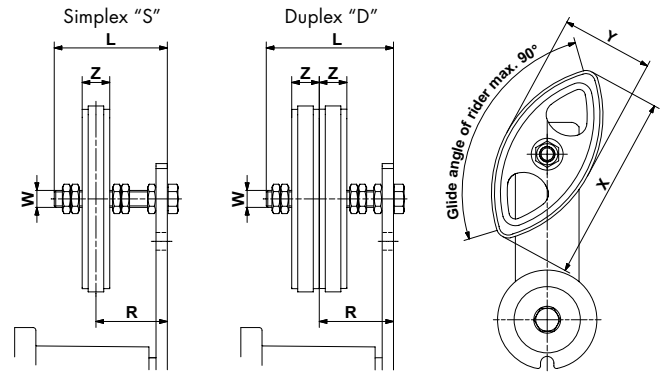
	Quality 8.8	Quality 12.9 for SE-F / SE-FE
M6	10 Nm	17 Nm
M8	25 Nm	41 Nm
M10	49 Nm	83 Nm
M12	86 Nm	145 Nm
M16	210 Nm	355 Nm
M20	410 Nm	690 Nm
M24	750 Nm	

# Chain Drives

## Chain rider set type P

### Chain rider type P

For an ideal positioning of the chain rider/s on the threaded rod we do recommend to position them on each side by means of two nuts, secured against each other, with some play for swivelling into working position.

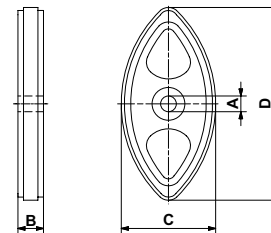


## Chain rider set type P

Roller chain ANSI   DIN 8187		Type	Art. No.	W	L	X	Y	Z	Torque hex nut 0.5d [Nm]	Adjusting range track R	Size SE	Weight [kg]
<b>Simplex "S"</b>												
35	ISO 06 B-1	P3/8"-8 S	06 550 001	M8	45	74	37	10.2	11	19-34	11	0.05
40	ISO 08 B-1	P1/2"-10 S	06 550 002	M10	55	96	48	13.9	20	23-41	15/18	0.10
50	ISO 10 B-1	P5/8"-10 S	06 550 003	M10	55	126	63	16.6	20	24-39	18	0.12
60	ISO 12 B-1	P3/4"-12 S	06 550 004	M12	80	148	72	19.5	35	30-61	27	0.18
<b>Duplex "D"</b>												
35	ISO 06 B-2	P3/8"-8 D	06 560 001	M8	45	74	37	10.2	11	25-30	11	0.07
40	ISO 08 B-2	P1/2"-10 D	06 560 002	M10	55	96	48	13.9	20	30-34	15/18	0.12
50	ISO 10 B-2	P5/8"-10 D	06 560 003	M10	70	126	63	16.6	20	34-46	18	0.17
60	ISO 12 B-2	P3/4"-12 D	06 560 004	M12	80	148	72	19.5	35	40-52	27	0.26

## Chain rider type P

Roller chain ANSI   DIN 8187		Type	Art. No.	A <sup>+0.2</sup> <sub>0</sub>	B	C	D	Weight [kg]
35	ISO 06 B	P3/8"	06 540 001	8	10.2	37	74	0.02
40	ISO 08 B	P1/2"	06 540 002	10	13.9	48	96	0.03
50	ISO 10 B	P5/8"	06 540 003	10	16.6	63	126	0.05
60	ISO 12 B	P3/4"	06 540 004	12	19.5	72	148	0.07

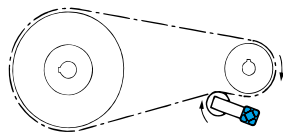


## Mounting instructions for Chain Drives

See also complementary mounting instructions on page 4.5.

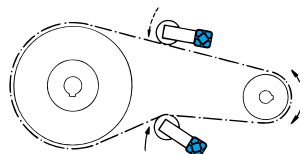
### Standard positioning

The ROSTA tensioning device should be placed on the slack-side of the chain drive, close by the smaller sprocket wheel in order to enlarge its contact-arc, therefore contact application from outer side of drive. In mounted position the tensioner-arm should stay close to parallel to the chain run, in drain direction. By extremely long chain drives it is recommendable to install several tensioners or the type "Boomerang®" in order to enlarge the slack compensation.



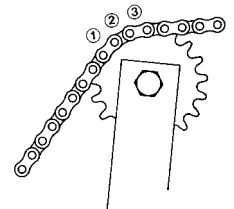
### Reversible chain drive

By reversible chain transmissions it is recommendable to install a tensioner on each side of the chain-strands. Due to the alternate occurring of the slack, both tensioners should only be pre-tensioned up to max. 20°, in order to retain a reset-path of 10°, when strains are changing from slack span on working span in reversible applications.



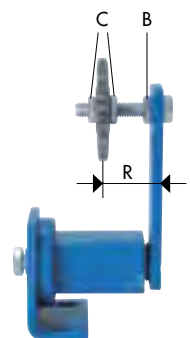
### Sprocket teeth in mesh

By the initial tensioning of the chain at least three teeth of the tensioner sprocket wheel should be in mesh with the rollers. The min. distance between sprocket wheel of the tensioner to the next sprocket wheel in the chain drive should be at least four chain-pitches.



### Adjustment of chain-track

The wheel of the sprocket wheel set is adjustable according to the position of the chain drive track. The wheel is positioned between two nuts on the threaded shaft. In changing the adjustment band "R", the track of the tensioner wheel can be set according to relevant strand course. After positioning of sprocket, re-tighten the two nuts on the side. The counter-nut "B" remains always tightened.



# Strained Applications!

A few examples:



Tensioner Devices



**ROSTA**   
*swinging solutions*

ROSTA AG  
CH-5502 Hunzenschwil  
Phone +41 62 889 04 00  
Fax +41 62 889 04 99  
E-Mail [info@rosta.ch](mailto:info@rosta.ch)  
Internet [www.rosta.com](http://www.rosta.com)

Changes regarding contents reserved.  
Any reprint, also in extracts, requires our explicit and confirmed approval.

# Administrative and Technical Information

## 1. Guidance, services and offers

Please contact your local ROSTA representative listed in our representatives list on the back of the catalogue if you have any questions or concerns.

We require a full list of technical specifications including any available sketches and data sheets for the preparation of an appropriate offer. This information makes it possible for us to determine whether a standard or custom element is the most cost-effective solution for you. For complex applications, our representative or the home office will send you a questionnaire about the exact specifications for what you need.

Terms and conditions for payments and deliveries are included with our offer or available on our website at [www.rosta.com](http://www.rosta.com) → Company → General Terms.

## 2. Orders and deliveries

Please include the offer number on your order along with the exact quantity, product name and number. Please send your order to your local ROSTA representative.

## 3. Availability

Most of the standard products listed in our catalogue are available from stock through your local representative or directly from ROSTA AG.

Custom pieces for a specific customer requirement are produced and delivered as specified in your order confirmation. The delivery time for special custom pieces can be reduced by signing a call order agreement (make-and-hold-order) with ROSTA AG. Please contact us if you would like to discuss this.

## 4. Technical information

Please observe the capacity limits for our elements as specified in the catalogue. If you are in doubt, please contact us or your ROSTA representative.

Please follow the assembly instructions detailed in the catalogue. Make sure that your assembly workers are instructed correctly. If you have any questions, please contact us or your ROSTA representative.

**Assembling elements:** To attach our elements or mounts, please always use the largest dimensioned standard machine bolts possible with a minimum strength class of 8.8 that fit into the drilled holes in the elements or attachment clamps. Use an ISO 898 table or your screw supplier's guidelines for the maximum tightening torque.

If in doubt, control your bolt attachments using the VDI Guidelines 2230.

Use DIN 125A stamped washers to attach housings with unworked drilled holes in the casting (for example AB 50) or oblong holes (for example MB supports).

## 5. Proviso

This catalogue and our other technical information are intended solely for your orientation and information; they may not be construed as absolutely binding in any way. We ask that you adapt the assembly and use of our products in a way suited to the prevailing conditions and situation.

The reproduction of this document in full or in part may only be done with our expressed written permission.

# The leading manufacturer of torsional rubber springs



## SUBSIDIARIES

**Australia** [www.rostaaustralia.com.au](http://www.rostaaustralia.com.au) **Canada** [www.rosta.ca](http://www.rosta.ca) **China** [www.rostachina.com](http://www.rostachina.com)  
**Germany** [www.rosta.de](http://www.rosta.de) **Italy** [www.rostaitalia.com](http://www.rostaitalia.com) **USA** [www.rosta.com](http://www.rosta.com)

## DISTRIBUTORS

**Argentina** [heuchert@ciudad.com.ar](mailto:heuchert@ciudad.com.ar) **Austria** [www.haberkorn.com](http://www.haberkorn.com) **Belgium/Luxemburg** [www.atbautomation.eu](http://www.atbautomation.eu)  
**Brazil** [www.atibrasil.com.br](http://www.atibrasil.com.br) **Chile** [www.riosan.cl](http://www.riosan.cl) **Czechia** [www.rupet.eu](http://www.rupet.eu) **Denmark** [www.jens-s.dk](http://www.jens-s.dk) **Finland** [www.sks.fi](http://www.sks.fi)  
**France** [www.rosta.com](http://www.rosta.com) **Great Britain** [www.kobo.co.uk](http://www.kobo.co.uk) **Greece** [www.alexandris.com](http://www.alexandris.com) **Iceland** [www.falkinn.is](http://www.falkinn.is)  
**India** [www.technotalent.in](http://www.technotalent.in) **Japan** [www.mikipulley.co.jp](http://www.mikipulley.co.jp) **Lithuania/Latvia** [www.techvitas.lt](http://www.techvitas.lt)  
**Malaysia** [www.masterjaya.com.my](http://www.masterjaya.com.my) **Netherlands** [www.atbautomation.eu](http://www.atbautomation.eu) **New Zealand** [www.saecowilson.co.nz](http://www.saecowilson.co.nz)  
**Norway** [www.jens-s.no](http://www.jens-s.no) **Peru** [www.grupo-isc.com](http://www.grupo-isc.com) **Philippines** [www.severosyling.com](http://www.severosyling.com) **Poland** [www.archimedes.pl](http://www.archimedes.pl)  
**Portugal** [www.april.pt](http://www.april.pt) **Russia** [www.fam-drive.ru](http://www.fam-drive.ru) **Singapore** [henry@smcomponent.com](mailto:henry@smcomponent.com) **Slovenia** [www.m-trade.si](http://www.m-trade.si)  
**South Africa** [www.orangevmc.co.za](http://www.orangevmc.co.za) **South Korea** [www.sewonworld.co.kr](http://www.sewonworld.co.kr) **Spain** [www.tracsa.com](http://www.tracsa.com)  
**Sweden** [www.kontima.se](http://www.kontima.se) **Thailand** [www.virtus.co.th](http://www.virtus.co.th) **Turkey** [www.entatek.com](http://www.entatek.com)



Changes regarding data reserved.  
Any reprint, also in extracts, requires  
our explicit and confirmed approval.



### ROSTA AG

Hauptstrasse 58  
CH-5502 Hunzenschwil

Phone +41-62-889 04 00  
Fax +41-62-889 04 99  
E-Mail [info@rosta.ch](mailto:info@rosta.ch)  
Internet [www.rosta.com](http://www.rosta.com)

# ROSTA



T2016.914